The Cell Cycle

G_2 → Hypothesis for division (forming) [illegible]

Interphase

Prophase

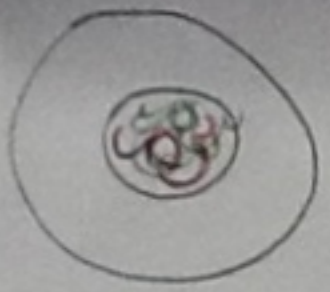
Metaphase

Anaphase

Telophase

Cytokinesis: Animal

Cytokinesis: Plant



3 parts

G_1 → Cell growth (make new proteins and organelles)

S → DNA replication (DNA synthesized and chromosomes duplicated)

G_2 → Preparation for division (Molecules for division produced)

Interphase

Prophase

Metaphase

Anaphase

Telophase

Cytokinesis: Animal

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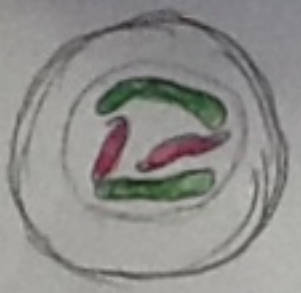

- Chromatin condenses further
- Duplicated chromosomes become visible
- Spindle fiber start to form outside of the nucleus
- Nuclear envelope breaks down
- Centrioles move to opposite sides, or poles of the cell

Prophase

Metaphase

Anaphase

Telophase

Cytokinesis: Animal

Cytokinesis: Plant

- Chromosomes line up across the center of the cell
- Spindle fibers connect to the centromere of each chromosome

Metaphase

Anaphase

Telophase

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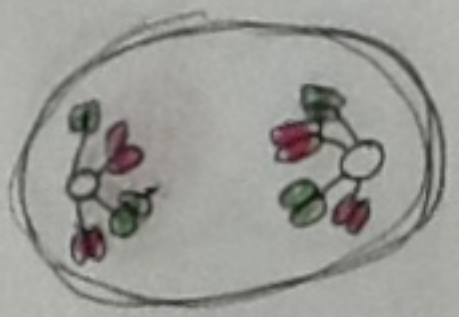


- Sister chromatids separate and move to opposite ends of the cell due to spindle fibers pulling them
- Single chromatids are each located on either side of the cell

Anaphase

Telophase

Cytokinesis: Animal

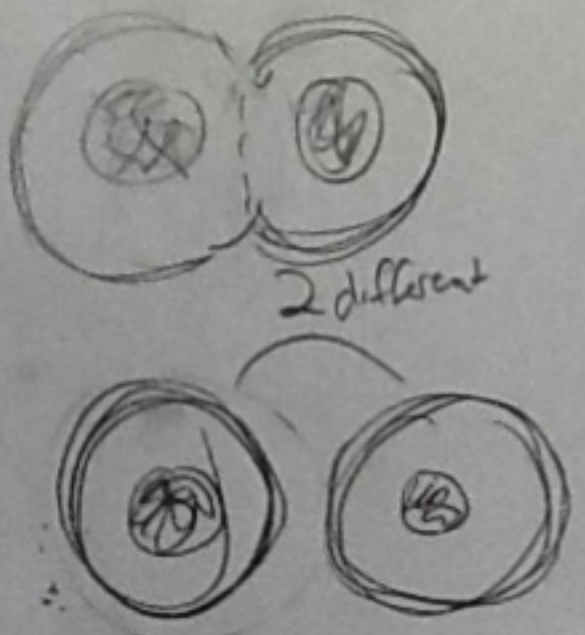
Cytokinesis: Plant

- Individual chromosomes begin to loosen and spread out into a tangle of chromatin
- Nuclear envelope and nucleolus reform around each cluster of chromosome
- Spindle breaks apart and disappears

Telophase

Cytokinesis: Animal

Cytokinesis: Plant

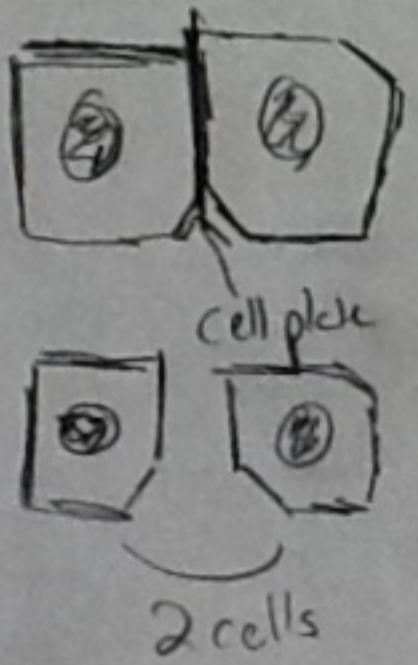


- Division of the cytoplasm
- Splits one cell into two distinct
- Cell membrane is pinched off, forming a identical daughter cells

Cytokinesis: Animal

Cytokinesis: Plant

- Division of cytoplasm
- Splits one cell into two distinct cells
  - Cell plate forms between divided nuclei and then develops into a membrane and eventually a new cell wall, separating into two identical daughter cells.



Cytokinesis: Plant